

546CS
1.20% by weight, Si:0.60% by weight or less, Mn:0.25% by weight or less, Cr:1.00 to 1.50% by weight and Mo:0.60 to 1.50% by weight, then applied with hardening/tempering, the amount of residual austenite over the entire cross section of the one of the inner ring and the outer ring is 0% by volume and a surface hardness is HRC of 62 or more, and in which a rolling element is formed of a steel material containing alloy ingredients each within a range of C:0.3 to 0.6% by weight, Si:0.3 to 1.5% by weight, Mn:0.3 to 1.7% by weight, Cr:0.5 to 2.5% by weight and Mo:0.6 to 3.0% by weight, with the O content being 9 ppm or less, applied with carbo-nitridation and then applied with hardening/tempering, the amount of residual austenite over the entire cross section of the rolling element is 0% by volume and a surface hardness is HRC of 62 or more.

3. (Amended) A rolling bearing in which at least one of an inner ring and an outer ring is formed of a steel material containing alloy ingredients each within a range of C:0.8 to 1.20% by weight, Si:0.60% by weight or less, Mn:0.25% by weight or less, Cr:1.00 to 1.50% by weight and Mo:0.60 to 1.50% by weight, then applied with hardening/tempering, the amount of residual austenite is 0% by volume and a surface hardness is HRC of 62 or more, and in which the rolling element is formed of a martensitic steel, applied with hardening/tempering and then applied with nitridation to form a nitride layer at a thickness

51

of 3 μm or more on the surface and then applied with finishing to a surface roughness of 0.1 μm Ra or less.

Subcs 7
91
4. (Amended) A rolling bearing in which at least one of an inner ring and an outer ring is formed of a steel material containing alloy ingredients each within a range of C:0.8 to 1.20% by weight, Si:0.60% by weight or less, Mn:0.25% by weight or less, Cr:1.00 to 1.50% by weight and Mo:0.60 to 1.50% by weight, then applied with hardening/tempering, the amount of residual austenite over the entire cross section of the one of the inner ring and the outer ring is 0% by volume and a surface hardness is HRC of 62 or more, and in which a rolling element is formed of ceramics.

92
(Please insert the following new Claims:)

--5. (New) A rolling bearing in which at least one of an inner ring and an outer ring is formed of a steel material containing alloy ingredients each within a range of C:0.8 to 1.20% by weight, Si:0.60% by weight or less, Mn:0.25% by weight or less, Cr:1.00 to 1.50% by weight and Mo:0.60 to 1.50% by weight, then applied with hardening/tempering, the amount of residual austenite over the entire cross section of the one of the inner ring and the outer ring is 0% by volume and a surface hardness is HRC of 62 or more, and in which the rolling element is formed of a martensitic steel, applied with hardening/tempering and then applied with nitridation to form a